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ABSTRACT

A survey instrument was developed to determine the status of microcomputers in the public schools of Louisiana. The instrument solicited information concerning the number of microcomputers in the schools, the manufacturers of the computers, and how the computers were being used in the school system. The survey was mailed to 66 districts in the state in 1980, 1984, and 1989. Analyses of the responses indicate that computer acquisitions from all strata of the public school systems of the state grew at an astonishing rate over the 10-year period. Also, the popularity of the Tandy microcomputer decreased while the popularity of the Apple and IBM microcomputers and other microcomputers with compatible operating systems increased. The most common usage reported was computer science instruction in secondary mathematics courses in 1980, and the ratio of students per computer ranged from 11.5 to 21.5 in the 10 parishes with the highest ratios in 1989. (DB)

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COMPUTERS IN LOUISIANA PUBLIC SCHOOLS: A TREND ANALYSIS 1980-1990

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In October of 1978 the Tandy Corporation introduced the TRS-80 microcomputer through its Radio Shack retail outlet chain. Shortly thereafter, both the Apple II and Commodore computers became available for purchase. The cost of these new computers was such that many public schools and interested individuals could afford them for the first time. Computers slowly began to show up in Louisiana schools but within a relatively short period of time the acquisition of computers acelerated at such an astounding rate that it was difficult to tell which schools had them, how many they had, and how they were using them.

A survey instrument was developed in an attempt to determine the status of microcomputers in the public schools of Louisiana. In September of 1980 the survey instrument was mailed to selected personnel in the sixty-six school districts in the state. The instrument solicited information concerning the number of computers in the schools, the manufacturer of the computers, and how the computers were being used in the school system.

Forty-nine of the sixty-six school districts responded to the survey. Of the forty-nine respondents thirty-three indicated they had no computers in their system. The sixteen school districts reporting computers and the number of computers is shown in Table 1.

TABLE 1

PARISH	NUMBER OF COMPUTERS
ACADIA	5
CALCASIEU	5
CAMERON	10
E. BATON ROUGE	20
GRANT	2
IBERIA	1
LAFAYETTE	5
LAFOURCHE	6
MADISON	6
MOREHOUSE	2
OUCHITA	2
ST. BERNARD	10
WEST FELICIANA	1
WEBSTER	17
ST. MARY	2
VERNON	1
TOTALS	95

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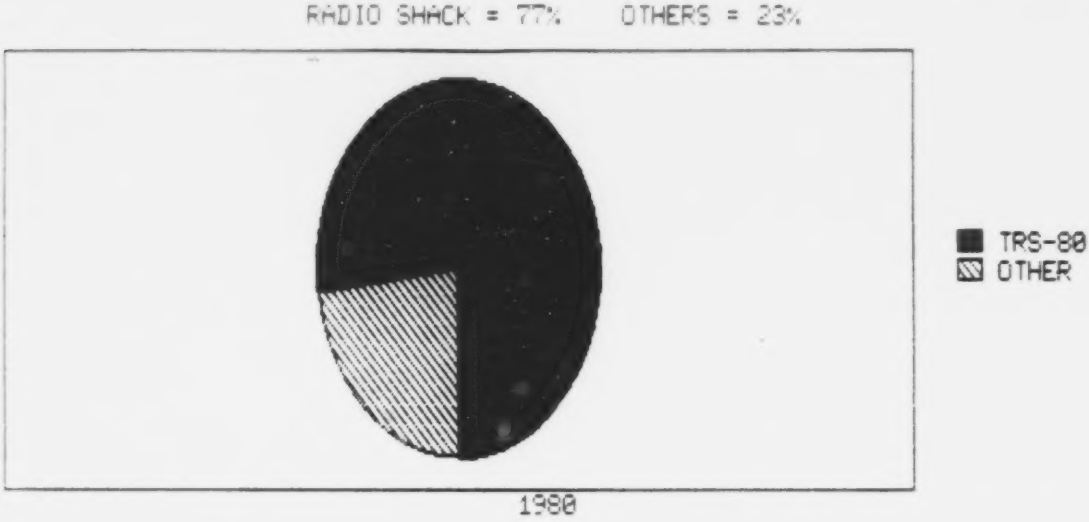
It should be noted that Caddo, Jefferson, and Orleans parishes did not respond to the survey. Since these are three of the larger parishes in the state it appears that the data would have been quite different in terms of total numbers had those parishes responded.

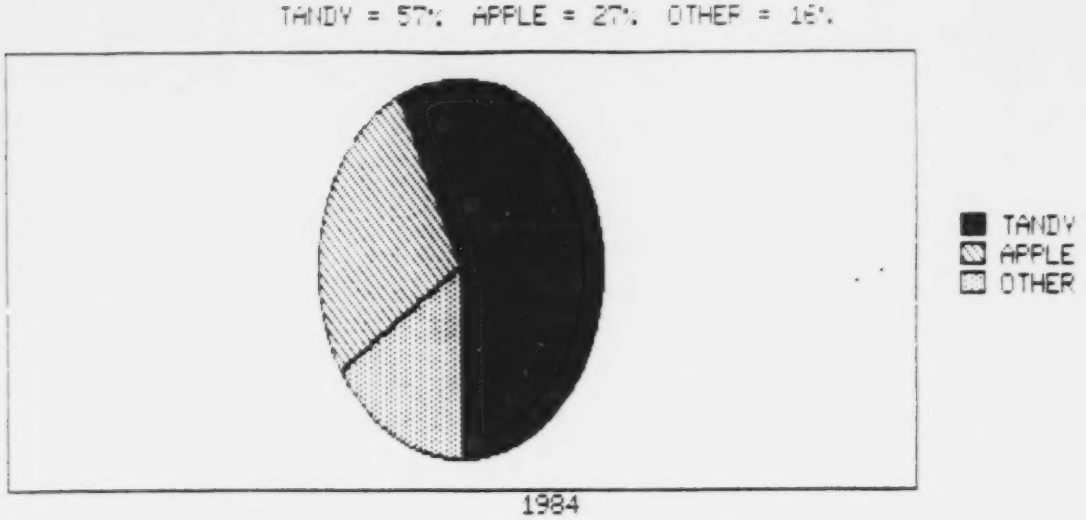
By far the most common computer in schools in September of 1980 was the Radio Shack TRS-80. Almost 80 percent of the computers listed were manufactured by the Tandy Corporation (TRS-80) with Apple, Commodore, Orange, Texas Instrument, Franklin, and Sinclair sharing the remaining percentage. Although the respondents reported a surprisingly wide variety of uses for the computers, the most common was in the area of computer science instruction in secondary mathematics courses.

FIGURE 1



During the 1982-83 academic year the Louiaiana Department of Education conducted a survey of approximately 2,000 public and private schools in the state. Results of that survey indicated that the Tandy Corporation microcomputers represented 57 percent of the units wuth Apple microcomputers representing 22 percent. The following year, 1983-84 , Tandy Corporation maintained its place as having the most widely used computers, but the lead had decreased to 34 percent , while Apple had increased its market share to 27 percent.

FIGURE 2



In October of 1984 the survey was again mailed to all public school systems in the state of Louisiana. A third survey instrument was sent to the public school systems in 1989. These data serve to illustrate the astonishing growth throughout the state in computer acquisitions from all strata of the public school systems of the state at a time when the state was undergoing severe economic problems. The data were obtained through designated central office personnel who had responsibility for computers in their parish. Most of the respondents reported their figures as an estimate rather than conducting an actual count. Many acknowledged that parent organizations, student clubs, and other groups may have acquired computers for the schools without processing them through the central office. These would not show up in the totals given by the parish. Table 2 illustrates the growth pattern for the ten year period covered by the three surveys.

Although IBM entered the personal computer market in 1981 with the introduction of the PC, it had very few units in the schools during the 1983-84 school term. This was to change dramatically in the next three to five years as software publishers started producing for the IBM. This had a significant impact on the numerous computer manufacturers and forced a "shake-out" in the industry in which manufacturers either ceased producing their machines or produced one compatible with the IBM. By 1987, most schools were purchasing equipment to run software for either the Apple or the IBM operating systems.

TABLE 2
Numbers of Computers in Louisiana Public Schools

Parish	1980	1984	1989
Acadia	5	154	543
Allen	0	9	80
Acension	0	160	472
Assumption	0	45	159
Avoyelles	*	29	222
Beauregard	0	60	350
Bienville	0	9	*
Bossier	0	275	350
Caddo	*	500	2,154
Calcasieu	5	240	1,106
Caldwell	0	25	42
Cameron	10	140	169
Catahoula	0	125	234
Claiborne	0	**35	*
Concordia	0	**50	*
DeSoto	0	**31	*
East Baton Rouge	20	700	1,100
East Carroll	0	15	35
East Feliciana	*	13	112
Evangeline	*	**43	*
Franklin	*	60	150
Grant	2	24	125
Iberia	1	51	250
Iberville	*	74	*
Jackson	0	19	28
Jefferson	*	264	3,500
Jefferson Davis	0	170	234
Lafayette	5	100	128
Lafourche	6	250	625
LaSalle	*	12	*
Lincoln	0	81	260
Livingston	*	**150	*
Madison	6	50	*
Morehouse	2	48	207
Natchitoches	*	185	*
Orleans	*	506	1,600
Ouachita	2	238	800
Plaquemines	0	100	150
Pointe Coupee	0	**20	*
Rapides	0	**176	200
Red River	0	90	*
Richland	*	100	262
Sabine	*	100	130
St. Bernard	10	**75	331

St. Charles	0	195	350
St. Helena	0	0	*
St. James	0	50	158
St. John	0	**12	150
St. Landry	0	35	*
St. Martin	*	60	250
St. Mary	2	52	*
St. Tammany	0	**144	600
Tangipahoa	*	75	*
Tensas	0	35	*
Terrebonne	0	100	110
Union	0	15	29
Vermilion	0	13	500
Vernon	1	150	475
Washington	0	15	175
Webster	7	117	435
West Baton Rouge	0	23	*
West Carroll	*	25	25
West Feliciana	1	60	150
Winn	0	40	65
City of Monroe	0	**49	*
City of Bogalusa	*	94	196

* Did not respond to survey
** Data obtained from Bulletin 1679, Third Annual Report of Computer-use in Louisiana Schools, Louisiana State Department of Education, May 1984.

The 1989 survey asked for a breakdown of computers by manufacturer. Table 3 gives the number of Apple or Apple compatible computers, the number of IBM or IBM compatible computers, and others.

Table 3 1989 Computer Survey
Numbers of Apple, IBM, and Other Computers

PARISH	TOTAL	APPLE	IBM	OTHER
Acadia	543	119	163	261
Allen	80	68	4	8
Acension	471	240	230	0
Assumption	159	143	0	16
Avoyelles	222	209	0	3
Beauregard	350	332	17	1
Bienville	*			
Bossier	350	315	35	0
Caddo	2,154	345	1,788	21
Calcasieu	1,106	177	863	66
Caldwell	42	36	0	7
Cameron	169	2	2	165
Catahoula	234	178	35	21
Claiborne	*			
Concordia	*			
DeSoto	*			
East Baton Rouge	1,100	999	77	24
East Carroll	35	31	0	4
East Feliciana	112	62	10	39
Evangeline	*			
Franklin	150	68	68	14
Grant	125	88	38	1
Iberia	250	148	80	22
Iberville	*			
Jackson	28	17	11	0
Jefferson	3,500	1,050	2,450	0
Jefferson Davis	234	222	0	11
Lafayette	128	32	49	51
Lafourche	625	612	12	
LaSalle	*			
Lincoln	260	226	8	26
Livingston	*			
Madison	*			
Morehouse	207	93	104	10
Natchitoches	*			
Orleans	1,600	320	1,280	
Ouachita	800	704	88	8
Plaquemines	150	105	45	
Pointe Coupee	*			
Rapides	200	200		
Red River	*			
Richland	262	176	31	55
Sabine	130	88	42	
St. Bernard	331	126	126	79
St. Charles	350	157	193	
St. Helena	*			
St. James	158	84	5	22
St. John	150	68	68	15
St. Landry	*			
St. Martin	250	220	68	15
St. Mary	*			

* Did not respond to survey

Table 3 Contd

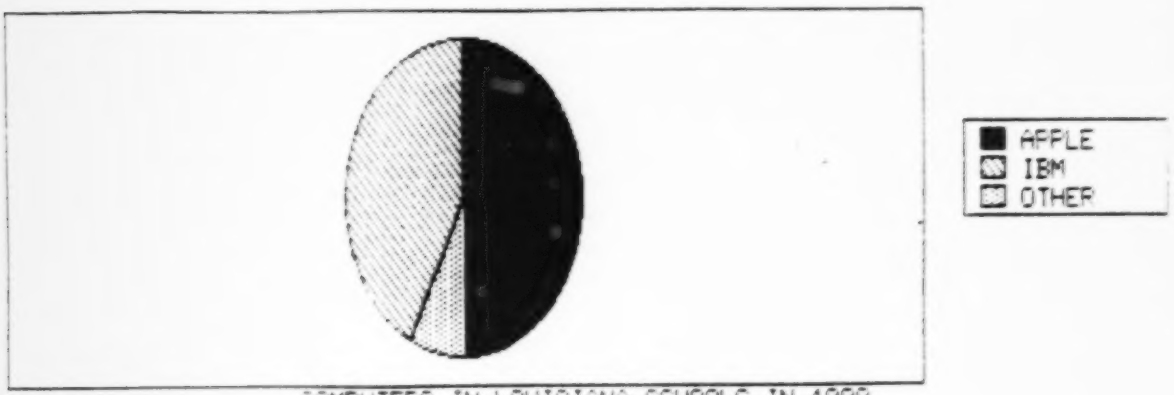
St. Tammany	600	480	60	10
Tangipahoa	*			
Tensas	*			
Terrebonne	110	110		
Union	29	7	16	6
Vermilion	490	470	15	5
Vernon	475	48	142	285
Washington	175	172	3	
Webster	435	309	35	91
West Baton Rouge	*			
West Carroll	25	13	11	1
West Feliciana	150	106	40	4
Winn	65	34	31	
City of Monroe	*			
City of Bogalusa	196	96	100	
TOTALS		9,906	8,403	1,470

* Did not respond to survey

Figure 3 is a graphic representation of computers in Louisiana public schools by percentage of Apple, IBM or others.

FIGURE 3

APPLE = 51 %. IBM = 43%. OTHER = 7%.



COMPUTERS IN LOUISIANA SCHOOLS IN 1989

The 1989 survey data were also used to determine the ratio of computers to student population. The student enrollment figures for each parish were obtained from the 1988-89 Louisiana School Directory. The ten parishes with the highest ratio of computers to students in the fall of 1989 are listed below.

PARISH	RATIO OF STUDENTS PER COMPUTER
1. Catahoula	11.50
2. Cameron	12.15
3. West Feliciana	12.37
4. Jefferson	16.00
5. Richland	16.50
6. Acadia	18.40
7. Webster	18.80
8. Vermillion	19.30
9. City of Bougalousa	19.70
10. Beauregard	21.51

As we approach the twenty-first century it appears that school systems have adopted the computer as another "tool" to be used in the educational process. The hardware is now cost effective for school systems. Whether educators are up to the task of developing appropriate learning packages will determine the final "effectiveness" of the tool.